

Claims

1. A microemulsion comprising a non-polar lipid, at least one polar solvent, and a surfactant, characterized in that it further comprises a polar lipid.

2. A microemulsion suitable for entrapping airborne particles, characterised in that it consists of a non-polar lipid, at least one polar solvent, a surfactant, a polar lipid and optionally inert carriers and/or excipients as sole ingredients, an environment being provided that substantially encloses said particles.

3. The microemulsion as claimed in claim 1 or claim 2, wherein said polar lipid is an alcohol lipid, an amine lipid, a sterol, a fat soluble vitamin, a glyceride, a phospholipid, a glycolipid, or a sphingolipid, or a mixture thereof.

4. The microemulsion as claimed in any of claims 1 to 3, wherein said polar lipid comprises a mono-acyl glyceride.

5. The microemulsion as claimed in claim 4, wherein said mono-acyl glyceride is glyceryl monooleate, glyceryl monolinoleate or glyceryl monolinenoleate.

6. The microemulsion as claimed in any of claims 1 to 5, wherein said non-polar lipid is a di-acyl glyceride, a tri-acyl glyceride, an animal oil, a vegetable oil, a mineral oil, a paraffin oil, a paraffin ester, or an ether or wax of fatty acids and wherein the non-polar lipid has a total number of carbon atoms of more than 22.

7. The microemulsion as claimed in any of claims 1 to 6, wherein said non-polar lipid comprises sesame oil.

8. The microemulsion as claimed in any of claims 1 to 7, wherein said non-polar lipid comprises 5 to 35 % (wt/wt) of said microemulsion.

9. The microemulsion as claimed in any of claims 1 to 8, wherein said polar solvent is water, a buffer, a glycol, an alcohol, or a mixture thereof.

5 10. The microemulsion as claimed in any of claims 1 to 9, wherein said polar solvent comprises 5 to 95 % (wt/wt), preferably 10 to 55 % (wt/wt) of said microemulsion.

10 11. The microemulsion as claimed in any of claims 1 to 10, wherein at least one component of said polar solvent has a pH exceeding pH 5.5.

12. The microemulsion as claimed in any of claims 1 to 11, wherein said polar solvent comprises propylene glycol and/or polyethylene glycol and/or saline solution.

15 13. The microemulsion as claimed in any of claims 1 to 12, wherein said surfactant has a hydrophilic-hydrophobic balance exceeding 7.

20 14. The microemulsion as in any of claims 1 to 13, wherein said surfactant is a polysorbate, a poloxamer, or a fatty acid polyoxyethylene.

15. The microemulsion as claimed in any of claims 1 to 14, wherein said surfactant is a polysorbate, a poloxamer, or a fatty acid polyoxyethylene.

25 16. The microemulsion as claimed in claim 15, wherein said polysorbate is polysorbate 80.

17. The microemulsion as claimed in any of claims 1 to 16, wherein said polar lipid comprises 20 to 50 % (wt/wt) of said microemulsion.

30 18. A composition suitable for administration to peripheral membrane linings of the nose, the eyes, the ears, the pharynx, and/or the larynx of a mammal,

characterized in that it comprises a pharmaceutically effective amount of a microemulsion as claimed in any of claims 1 to 17.

19. The composition as claimed in claim 18 wherein said composition also
5 comprises a locally acting drug.

20. The composition as claimed in claim 18 or claim 19, wherein said locally acting drug is an anti-allergical drug, a decongestant, or an anti-infection drug.

10 21. The composition as claimed in any of claims 18 to 20 wherein said locally acting drug is budesonide, beclomethasone dipropionate and loratadine.

22. A mouth or nasal spray device containing the microemulsion as claimed in any of claims 1 to 17.

15 23. A filter device comprising the microemulsion as claimed in any of claims 1 to 17.

24. A mouth or nasal spray device containing the composition as claimed in any
20 of claims 18 to 21.

25. A method for preventing airway diseases in a subject, caused directly or indirectly by airborne particles, said method comprising contacting at least one surface (preferably at least one mucosal surface) of said subject with a composition
25 as claimed in any of claims 18 to 21.

26. A method of preventing airborne particles reaching exterior mucosal membranes of a mammal, said method comprising the step of administering to said exterior mucosal membranes of said mammal a prophylactically effective amount of
30 a composition as claimed in any of claims 18 to 21.

27. The method as claimed in claim 26, wherein said composition is administered buccally or intranasally.

28. A microemulsion as claimed in any of claims 1 to 17 for use in therapy.

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29. The use of a micro-emulsion as claimed in any of claims 1 to 17 in the manufacture of a medicament for the treatment or prevention of a disease caused directly or indirectly by airborne particles, including airway diseases caused by airborne pollen, bacteria and/or viruses.

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30. The use as claimed in claim 29 wherein said disease is allergic rhinitis, the common cold, upper respiratory tract infection caused by viruses, upper respiratory tract infection caused by bacteria and/or non-allergic, non-infectious rhinitis.

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